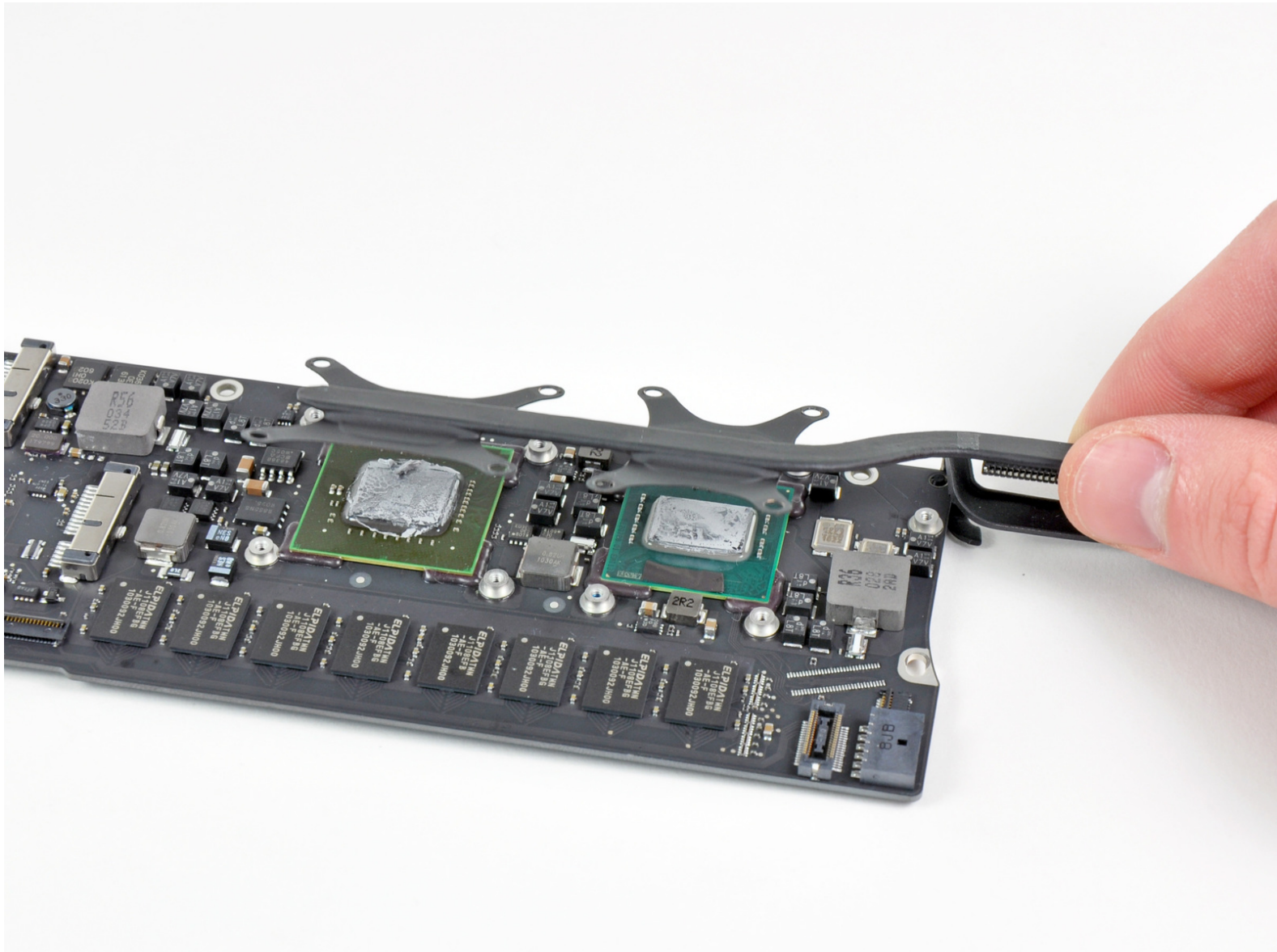




MacBook Air 13" Late 2010 Logic Board Replacement

Replace the logic board on your MacBook Air 13" Late 2010.

Written By: Andrew Bookholt



INTRODUCTION

Use this guide to completely replace the logic board.



TOOLS:

- [Arctic Silver ArctiClean](#) (1)
- [Arctic Silver Thermal Paste](#) (1)
- [P5 Pentalobe Screwdriver Retina MacBook Pro and Air](#) (1)
- [Spudger](#) (1)
- [T5 Torx Screwdriver](#) (1)
- [T8 Torx Screwdriver](#) (1)



PARTS:

- [MacBook Air 13" \(Late 2010\) 1.86 GHz Logic Board](#) (1)
- [MacBook Air 13" \(Late 2010\) 2.13 GHz Logic Board](#) (1)

Step 1 — Lower Case



- i** Before proceeding, close your computer and lay it on a soft surface top-side down.
- Remove the following ten screws:

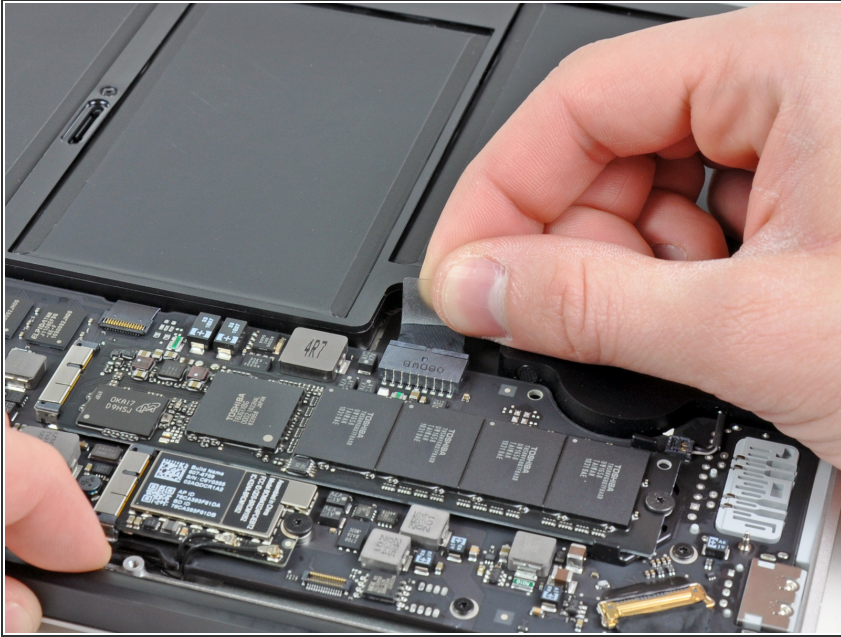
 - Two 9 mm 5-point Pentalobe screws
 - Eight 2.6 mm 5-point Pentalobe screws
- i** The special screwdriver needed to remove the eight 5-point Pentalobe screws can be found [here](#).


Step 2




- Wedge your fingers between the display and the lower case and pull upward to pop the lower case off the Air.
- Remove the lower case and set it aside.

Step 3 — Battery

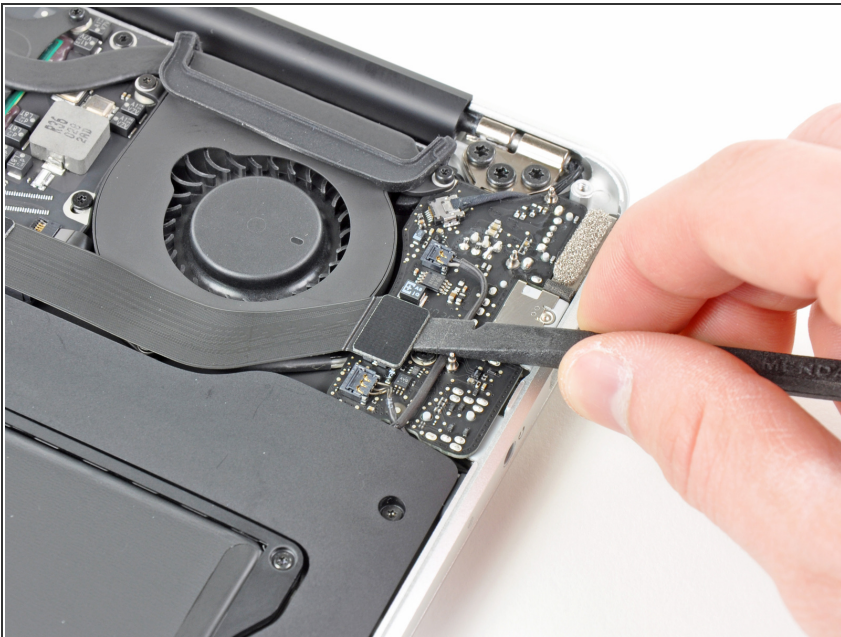


 For precautionary purposes, we advise that you disconnect the battery connector from the logic board to avoid any electrical discharge. This step is **optional** and is not required.

- Grab the clear plastic pull tab attached to the battery connector and pull it toward the front edge of the Air to disconnect the battery from the logic board.

 Do not lift upward on the connector as you disconnect it.


Step 4 — I/O Board Cable



- Use the flat end of a spudger to pry the I/O board cable connector upward out of its socket on the I/O board.

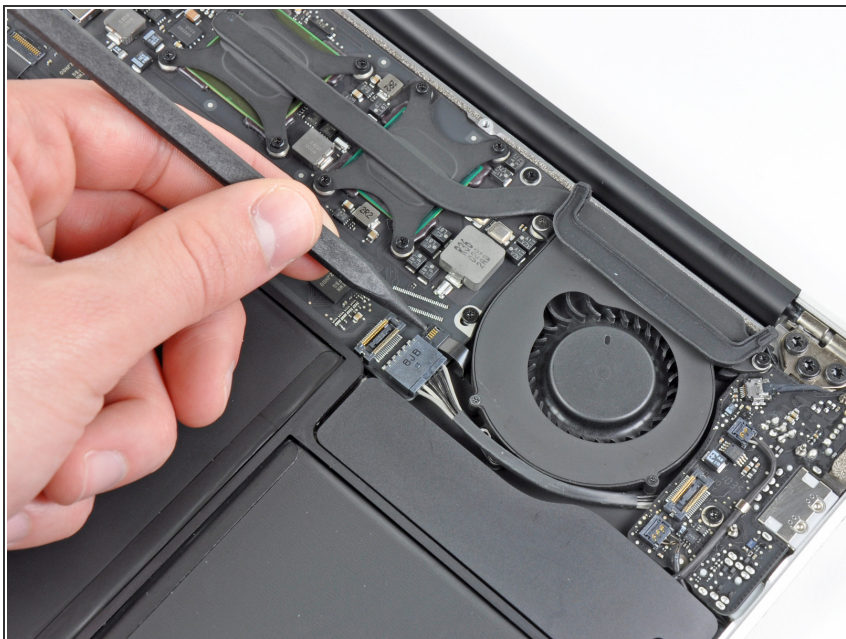
Step 5



 The following connector has an especially deep socket. Use care when disconnecting it.

- Carefully peel the I/O board cable from the top of the fan.
- While gently pulling the I/O board cable upward near its connection to the logic board, use the tip of a spudger to pry upward on alternating sides of the connector to help "walk" it out of its socket.
- Remove the I/O board cable.

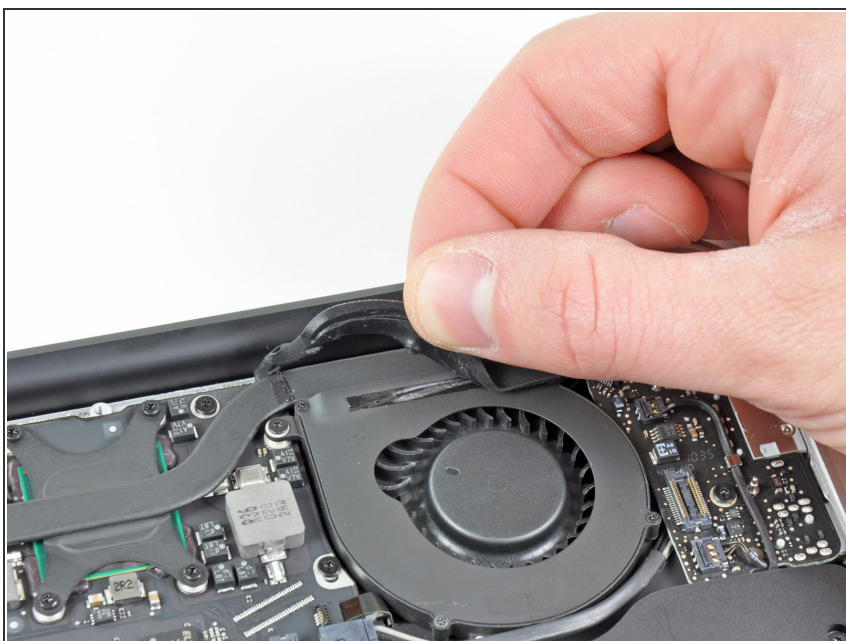
Step 6 — Fan



- Use the tip of a spudger to carefully flip up the retaining flap on the fan cable ZIF socket.

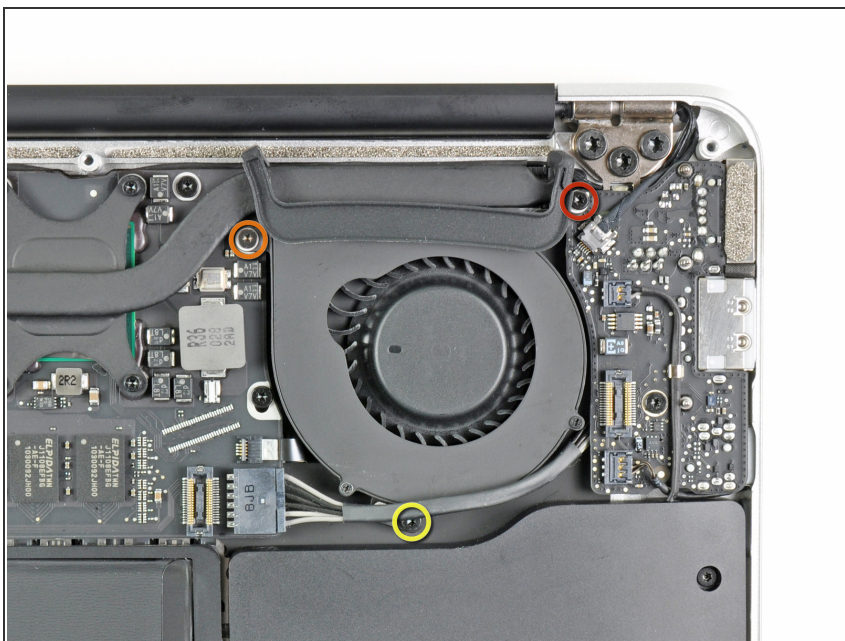
⚠ Be sure you are prying up on the hinged retaining flap, **not** the socket itself.

Step 7



- Peel the rubber gasket off the adhesive on the top of the fan.

Step 8



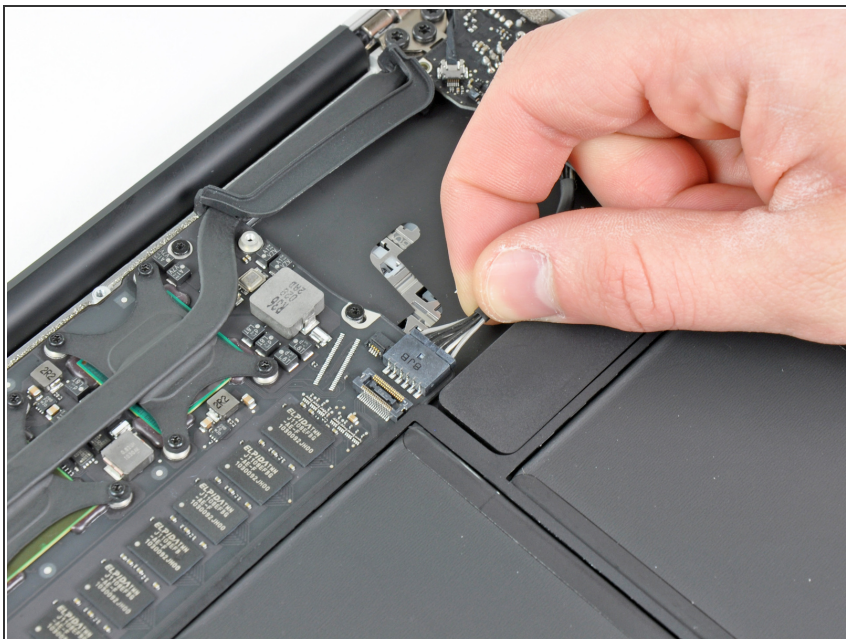
- Remove the following three screws securing the fan to the upper case:
 - One 3.6 mm T5 Torx screw
 - One 2.7 mm T5 Torx screw
 - One 3.6 mm T5 Torx screw with a short head

Step 9



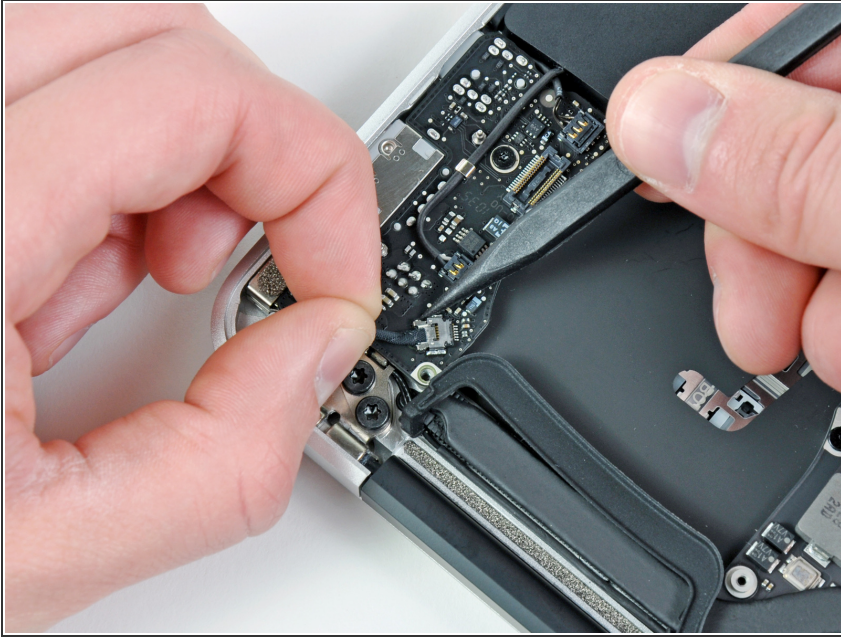
- Lift the fan out of the upper case and carefully pull the fan ribbon cable out of its socket as you remove it from the Air.

Step 10 — I/O Board




- Disconnect the I/O board by pulling the power cable away from its socket on the logic board.
- ⓘ Pull the cable parallel to the face of the logic board toward the right edge of the Air.

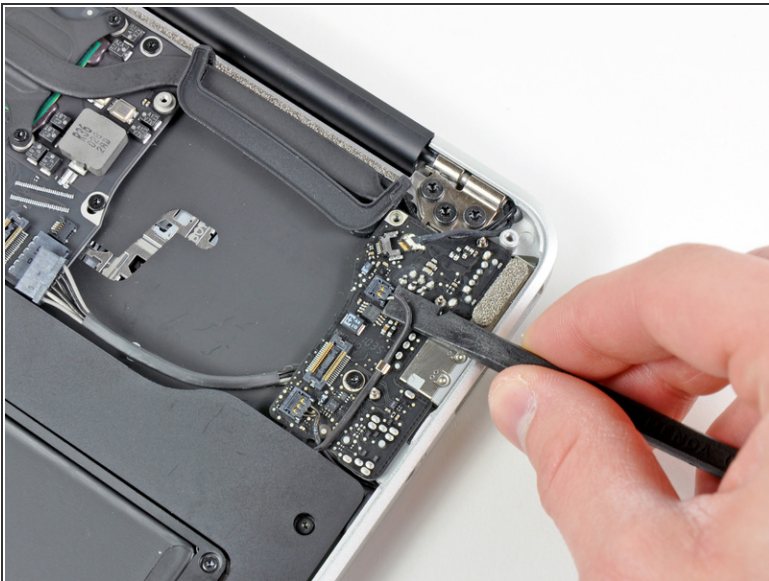
Step 11



- Pull the camera cable parallel to the face of the I/O board toward the corner of the Air to disconnect it from its socket, using the tip of a spudger to help push the connector out of its socket.

 Do not lift upward on this cable as you disconnect it, as its socket may break off the logic board.

Step 12



- Use the flat end of a spudger to pry the left speaker cable connector up and out of its socket on the I/O board.
- ⓘ Pry up from beneath the wires.
- De-route the left speaker cable from its retainer on the I/O board.

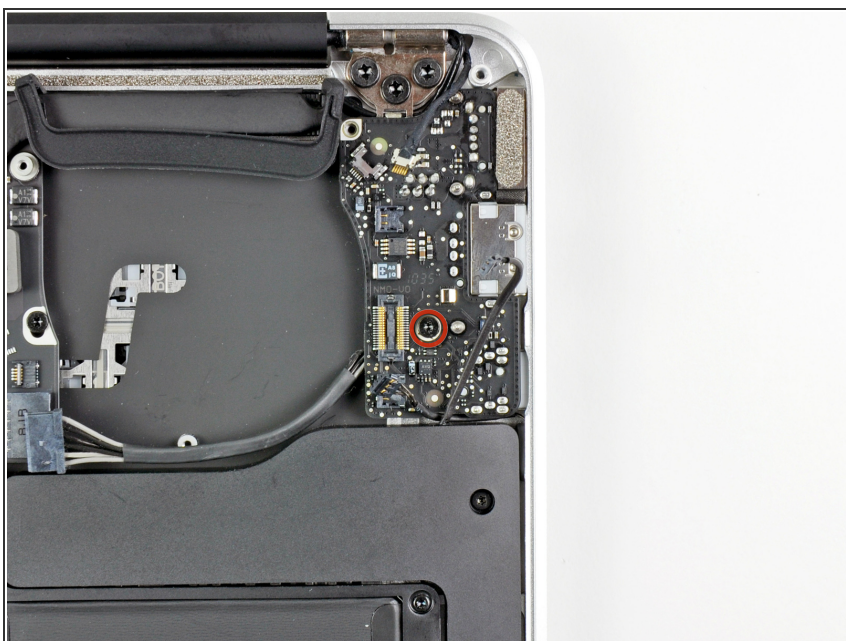
Step 13



- Use the flat end of a spudger to pry the microphone cable connector up and out of its socket on the I/O board.

ⓘ Pry up from beneath the wires.

Step 14



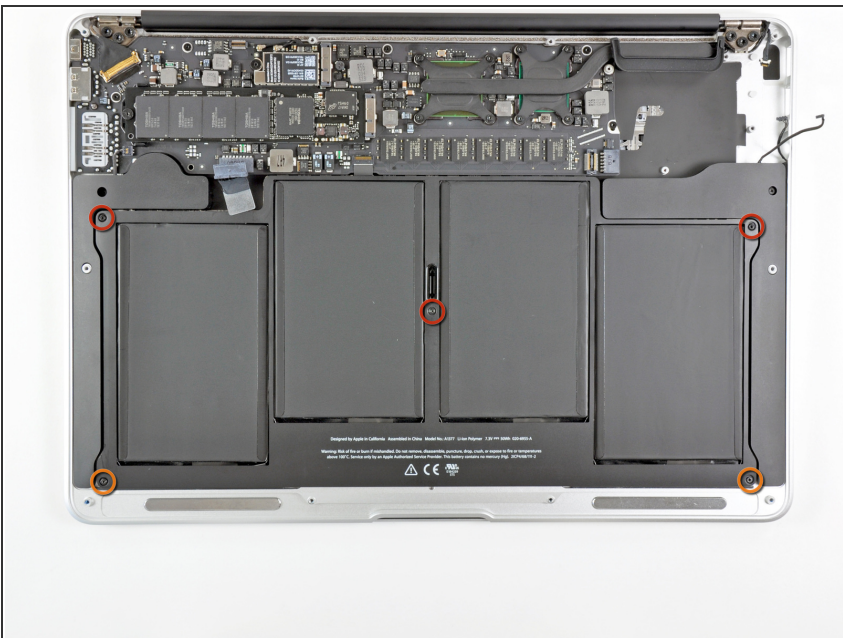
- Remove the single 3.6 mm T5 Torx screw securing the I/O board to the upper case.

Step 15



- Carefully lift the I/O board from its edge nearest the logic board and remove it from the upper case.

Step 16 — Battery



- Remove the following five screws securing the battery to the upper case:
 - Three 6.3 mm T5 Torx screws
 - Two 2.4 mm T5 Torx screws

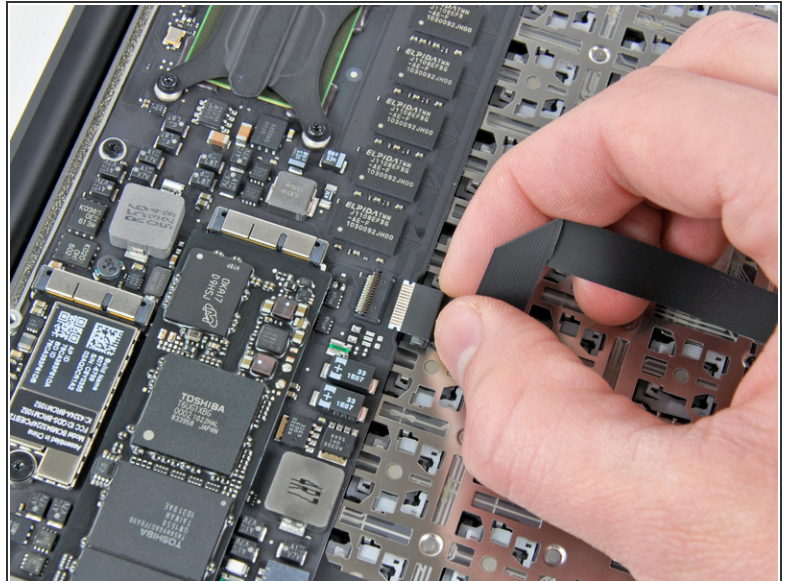
Step 17



⚠ When handling the battery, avoid squeezing or touching the four exposed lithium polymer cells.

- Lift the battery from its edge nearest the logic board and remove it from the upper case.

Step 18 — Logic Board



- Use the tip of a spudger or your fingernail to flip up the retaining flap on the trackpad ribbon cable ZIF socket.

⚠ Be sure you are prying up on the hinged retaining flap, **not** the socket itself.

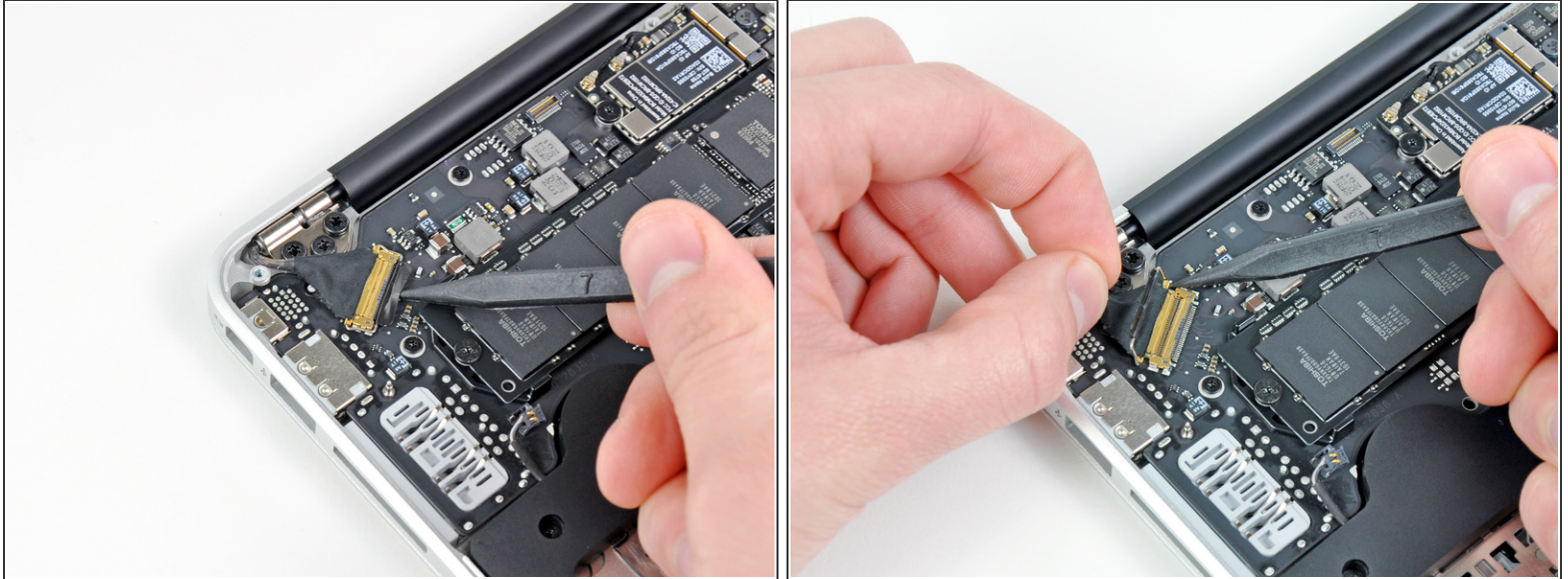
- Pull the trackpad ribbon cable straight out of its socket toward the front edge of the Air.

Step 19




- Use the flat end of a spudger to pry the right speaker cable connector up and out of its socket on the logic board.
- ⓘ Pry up from beneath the cables.

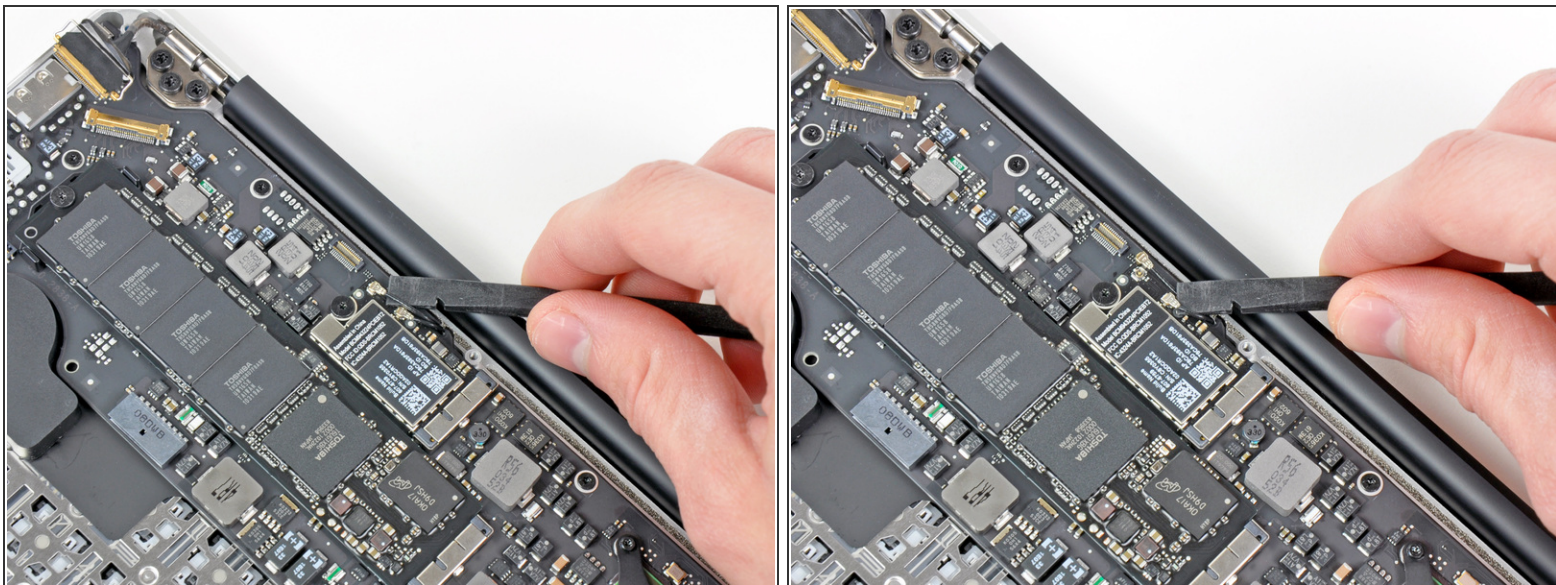
Step 20



- Gently push the tip of a spudger under the black plastic flap stuck to the display data cable lock to make the lock pop upward and away from the socket.
- While holding the lock away from the socket, use the tip of a spudger and your fingers to gently remove the display data cable from its socket by sliding it toward the corner of the Air.

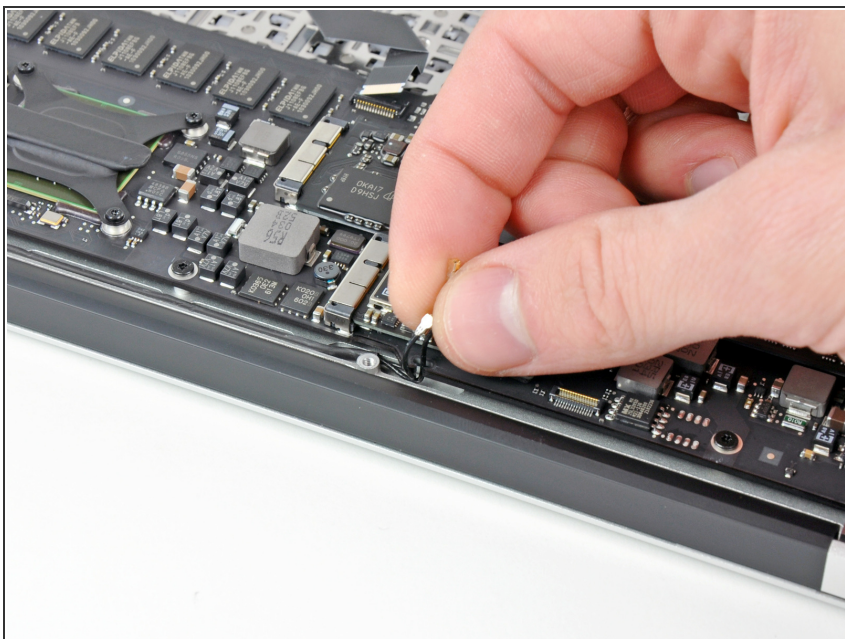
 Do not pull upward on the display data cable as you disconnect it, as its socket may break off the logic board.

Step 21



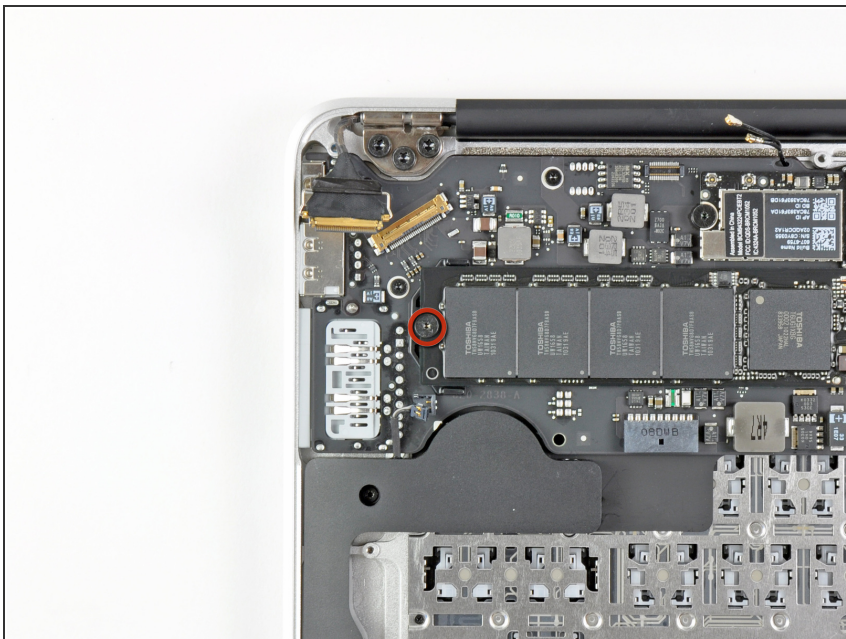
- Use the flat end of a spudger to pry both antenna cable connectors up and off their sockets on the AirPort/Bluetooth card.

Step 22



- Gently de-route the antenna cables from the slot cut into the logic board.

Step 23



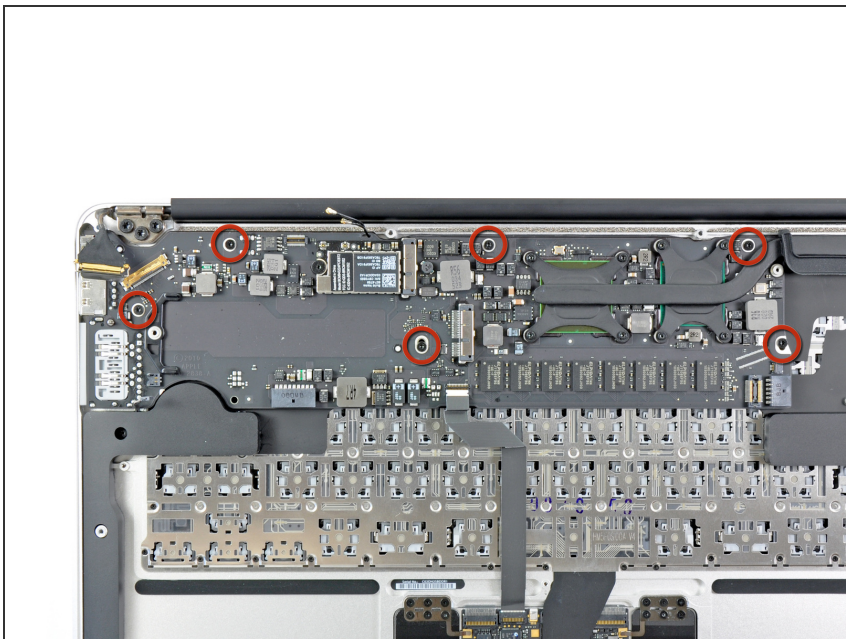
- Remove the single 2.85 mm T5 Torx screw securing the SSD to the logic board.

Step 24



- ⚠ Do not lift the end of the SSD excessively.
- Pull the drive straight out of its socket and remove it from the logic board.
- ★ When reinstalling the SSD, be sure it is properly seated before reinstalling its retaining screw.

Step 25



- Remove the six 6.3 mm T5 Torx screws securing the logic board to the upper case.

Step 26



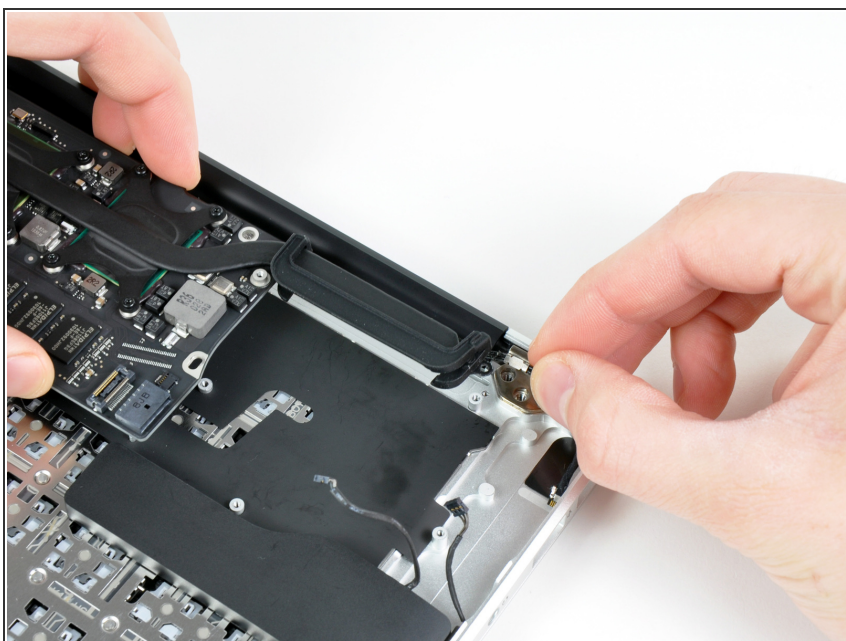
- Remove the inner two 4.9 mm T8 Torx screws securing the antenna cable retainer and left clutch hinge to the upper case.

Step 27



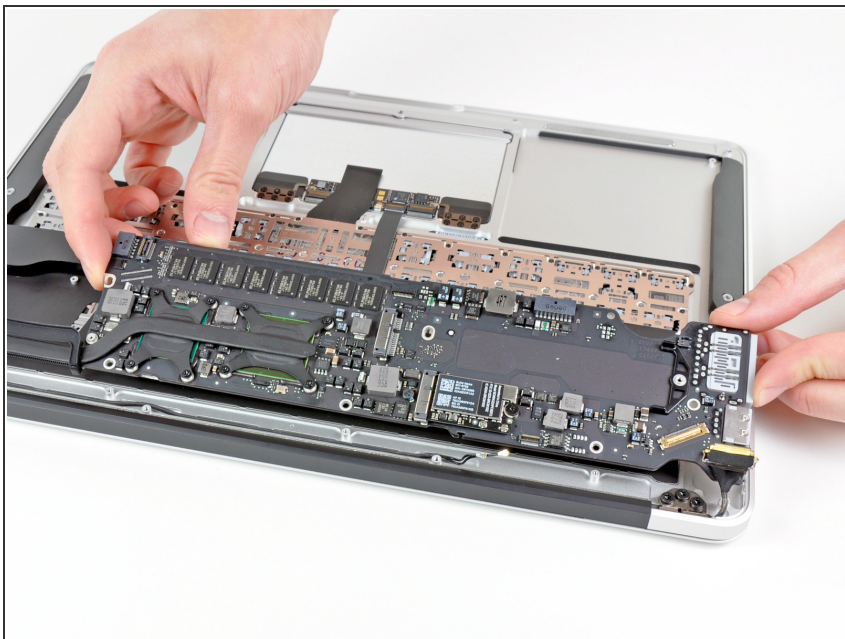
- Push the antenna cable retainer away slightly and remove the 3 mm T5 Torx screw securing the end of the heat sink to the upper case.

Step 28



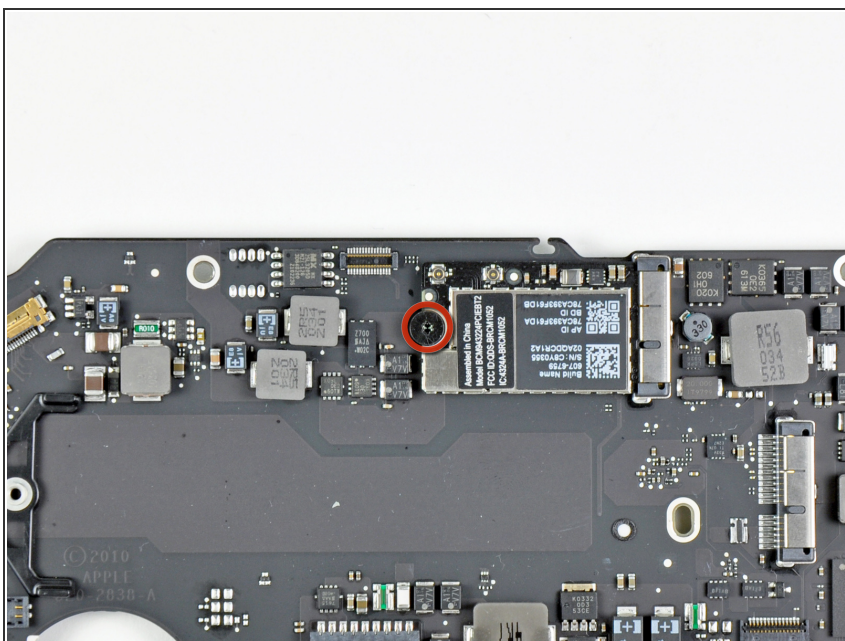
- ⓘ Hold the antenna cables out of the way as you lift the heat sink end of the logic board out of the upper case.

Step 29



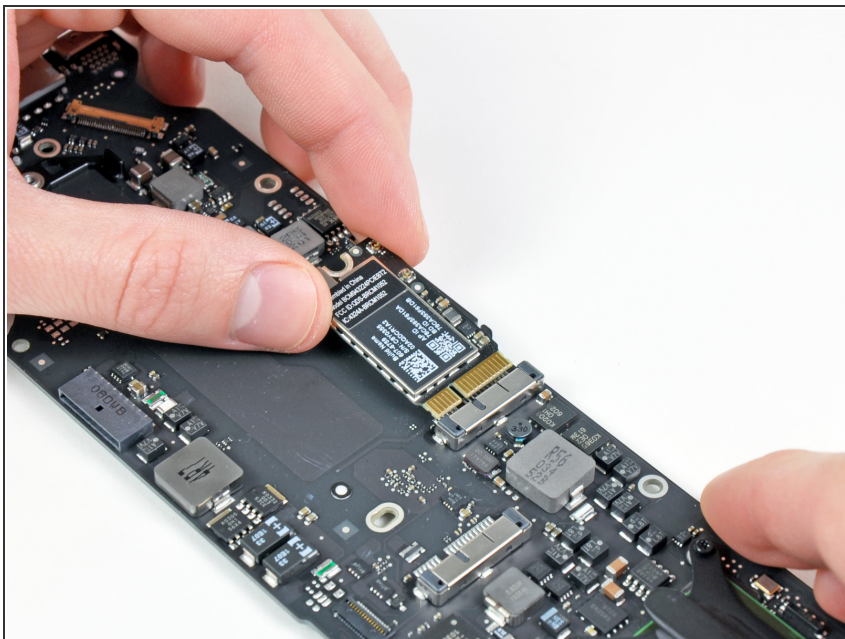
- Carefully remove the logic board assembly from the upper case, minding any cables that may get caught.

Step 30 — Logic Board



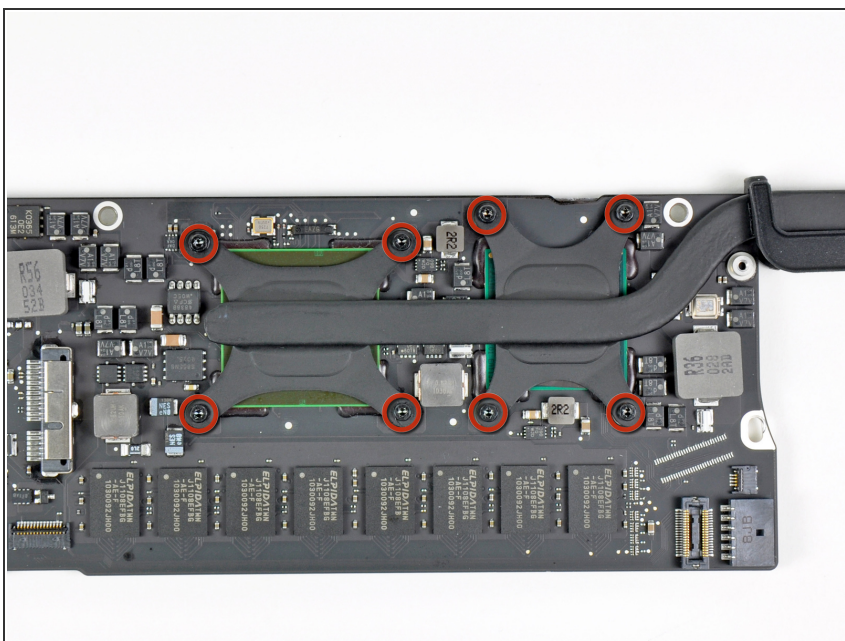
- Remove the single 2.9 mm T5 Torx screw securing the AirPort/Bluetooth card to the logic board.

Step 31



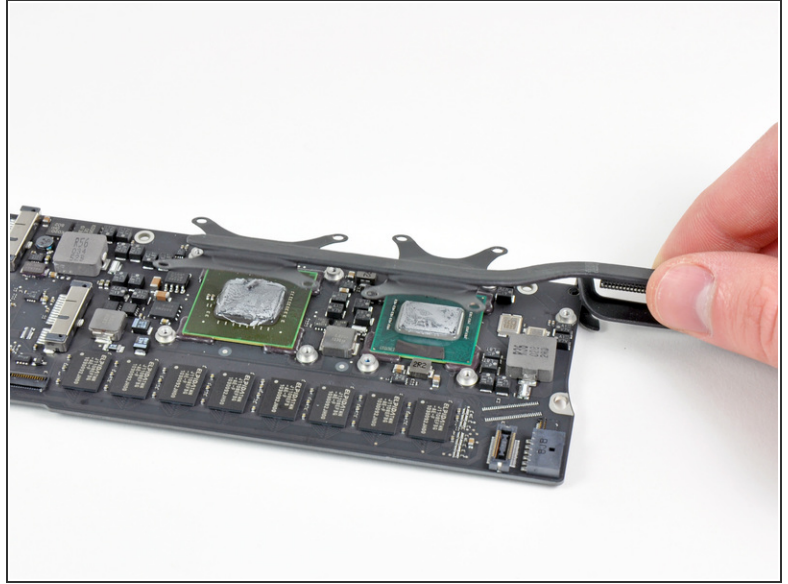
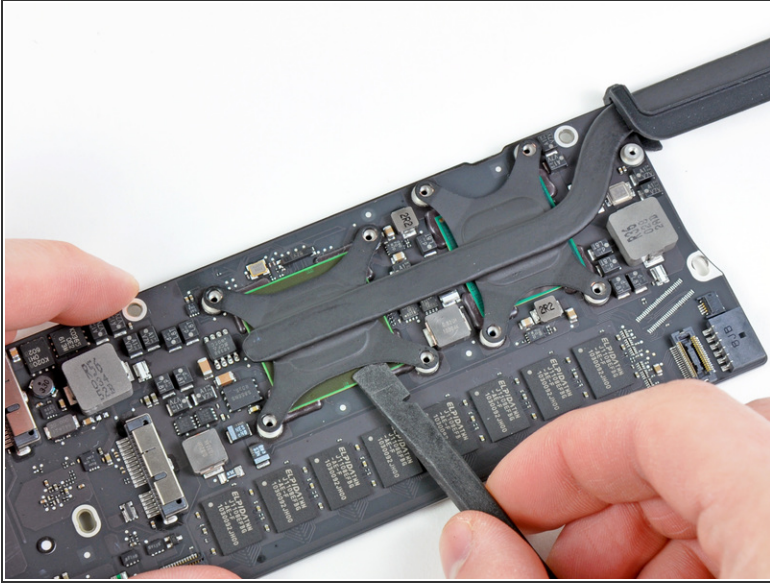
- Slightly lift the free end of the AirPort/Bluetooth board and pull it out of its socket on the logic board.
- Remove the AirPort/Bluetooth board from the logic board.

Step 32



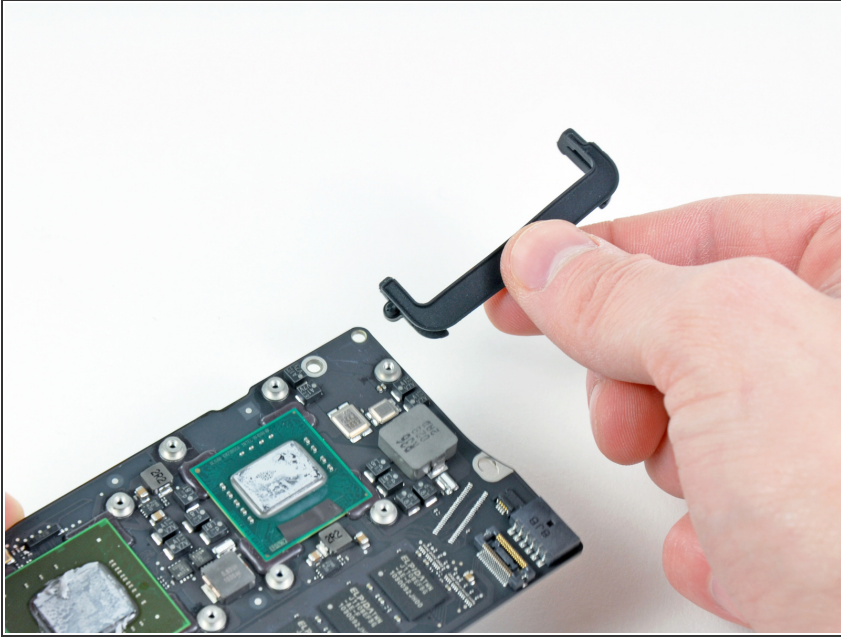
- Remove the eight 2.5 mm T5 Torx screws securing the heat sink to the logic board.

Step 33



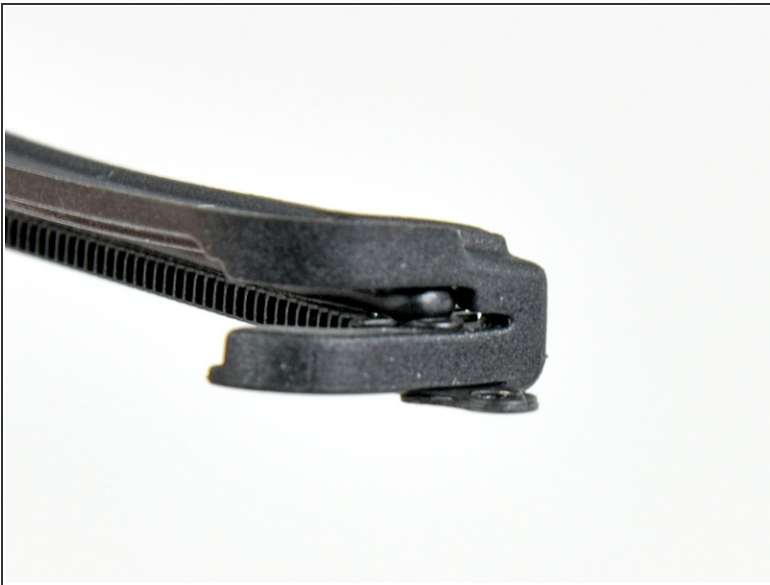
- i** If the heat sink seems to be stuck to the logic board after removing all eight screws, use a spudger to carefully separate the heat sink from the faces of the CPU and GPU.
- Remove the heat sink from the logic board.
 - When reinstalling the heat sink, be sure to apply a new layer of [thermal paste](#). If you have never applied thermal paste before, we have a [guide](#) that makes it easy.

Step 34



- Remove the rubber fan gasket from the logic board.
- Logic board remains.

Step 35



- i** These shots show how the rubber fan gasket should be installed during reassembly. Be sure not to install the gasket underneath the ear where the end of the heatsink is screwed down to the upper case.
- i** Additionally, be sure the small post molded into the rubber gasket mates with the hole cut into the upper right corner of the logic board.

To reassemble your device, follow these instructions in reverse order.

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